OCCUPATIONAL ANALYSES SERIES

Oil Burner Mechanic

2006

Human Resources and Social Development Canada
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Occupational Analyses Series

Oil Burner Mechanic

2006

Trades and Apprenticeship Division

Human Resources
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The Canadian Council of Directors of Apprenticeship (CCDA) recognizes this Occupational Analysis as the national standard for the occupation of Oil Burner Mechanic.

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OTHER RELATED OCCUPATIONAL TITLE

This analysis covers tasks performed by Oil Burner Mechanics whose occupational title has been identified by some provinces and territories by the name of Oil Burner Mechanic (Residential).

LIST OF RED SEAL NATIONAL OCCUPATIONAL ANALYSES

TITLE	NOC* Code
Appliance Service Technician (2005)	7332
Automotive Painter (2005)	7322
Automotive Service Technician (2005)	7321
Baker (2006)	6252
Boilermaker (2003)	7262
Bricklayer (2000)	7281
Cabinetmaker (2000)	7272
Carpenter (2005)	7271
Concrete Finisher (2006)	7282
Construction Electrician (2003)	7241
Cook (2003)	6242
Electrical Rewind Mechanic (1999)	7333
Electronics Technician – Consumer Products (1997)	2242
Farm Equipment Mechanic (2000)	7312
Floorcovering Installer (2005)	7295
Glazier (2004)	7292
Hairstylist (2005)	6271
Heavy Duty Equipment Technician (2004)	7312
Industrial Electrician (2003)	7242
Industrial Instrument Mechanic (2000)	2243
Industrial Mechanic (Millwright) (1999)	7311
Insulator (Heat and Frost) (2000)	7293
Ironworker (Generalist) (1993)	7264
Lather (Interior Systems Mechanic) (2002)	7284
Machinist (2005)	7231
Metal Fabricator (Fitter) (2003)	7263

Mobile Crane Operator (2006)	7371
Motorcycle Mechanic (1995)	7334
Motor Vehicle Body Repairer (Metal and Paint) (2005)	7322
Oil Burner Mechanic (2006)	7331
Painter and Decorator (2000)	7294
Partsperson (2005)	1472
Plumber (2003)	7251
Powerline Technician (2004)	7244
Recreation Vehicle Mechanic (2000)	7383
Refrigeration and Air Conditioning Mechanic (2004)	7313
Roofer (2006)	7291
Sheet Metal Worker (2006)	7261
Sprinkler System Installer (2003)	7252
Steamfitter – Pipefitter (1996)	7252
Tilesetter (2004)	7283
Tool and Die Maker (2005)	7232
Transport Trailer Technician (2003)	7321
Truck and Transport Mechanic (2000)	7321
Welder (2004)	7265

* National Occupational Classification

Requests for these publications should be forwarded to:

Trades and Apprenticeship Division
Human Resources Partnerships
Human Resources and Skills Development Canada
140 Promenade du Portage, Phase IV, 5th Floor
Gatineau, Quebec K1A 0J9

These publications are also available to order or download online at: **www.red-seal.ca**.

A comparative listing of apprenticeship training programs across Canada may be accessed at **www.ellischart.ca**. The Ellis Chart also lists the current provincial and territorial trade names.

FOREWORD

The first National Conference on Apprenticeship in Trades and Industries, held in Ottawa in 1952, recommended that the federal government be requested to co-operate with provincial and territorial apprenticeship committees and officials in preparing analyses of a number of skilled occupations. To this end, Human Resources and Skills Development Canada (HRSDC) sponsors a program, under the guidance of the Canadian Council of Directors of Apprenticeship (CCDA), to develop a series of occupational analyses.

The Occupational Analysis Program has the following objectives:

- to identify and group the tasks performed by skilled workers in particular occupations;
- to identify those tasks that are performed by skilled workers in every province and territory;
- to develop instruments for use in the preparation of Interprovincial Standards "Red Seal" Examinations and curricula for training leading to the certification of skilled workers;
- to facilitate the mobility, in Canada, of apprentices and skilled workers;
- to supply employers and employees, and their associations, industries, training institutions and governments with analyses of the tasks performed in particular occupations.

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GUIDE TO ANALYSIS

DEVELOPMENT OF ANALYSIS

A draft analysis is developed by a committee of industry experts in the field led by a team of facilitators. This draft analysis identifies all the tasks performed in the occupation.

The draft is translated and reviewed by the NOA Team of HRSDC. A copy of this analysis is then forwarded to provincial/territorial authorities for review by specialists in the field. Their recommendations are assessed and incorporated into the final draft.

The occupational analysis is published in both official languages.

STRUCTURE OF ANALYSIS

To facilitate understanding of the nature of the occupation, the work performed is divided into the following divisions:

BLOCK – is the largest division within the analysis and reflects a distinct operation relevant to the occupation.

TASK – is the distinct activity that, combined with others, makes up the logical and necessary steps the worker is required to perform to complete a specific assignment within a "BLOCK".

SUB-TASK – is the smallest division into which it is practical to subdivide any work activity and, combined with others, fully describes all duties constituting a "TASK".

Supporting Knowledge & Abilities

The elements of skill and knowledge that an individual must acquire to adequately perform the sub-task.

Trends

Any shifts or changes in technology that affect the block.

Related Components

All components related to a specified block being undertaken by the oil burner mechanic.

Tools and Equipment

All tools and equipment necessary for the oil burner mechanic to perform the work on all given tasks identified within the block.

Context

A statement written to clarify the intent and meaning of tasks in the analysis.

VALIDATION METHOD

At the request of the Canadian Council of Directors of Apprenticeship (CCDA), the Standardization Sub-committee developed a method for validating the Red Seal National Occupational Analyses.

A draft of the analysis is sent to all jurisdictions for validation. Each jurisdiction rates the sub-tasks and applies percentage ratings to blocks and tasks. This method for the validation of the National Occupational Analysis identifies common core tasks across Canada for a specific occupation. This feature facilitates the weighting of the Interprovincial Standards "Red Seal" Examinations.

DEFINITIONS

YES: the sub-task is performed by workers in the occupation in a specific jurisdiction.

NO: the sub-task is not performed by workers in the occupation in a specific jurisdiction.

BLOCK %: the average number of questions (items), derived from the collective decision made by workers within the occupation from all areas of Canada, that will be placed on an interprovincial examination to assess each block of the analysis.

TASK %: the average number of questions (items), derived from the collective decision made by workers within the occupation from all areas of Canada, that will be placed on an interprovincial examination to assess each task of the analysis.

NV: Not Validated by a province/territory.

ND: Not Designated in a province/territory.

PROVINCIAL/TERRITORIAL ABBREVIATIONS

NL: Newfoundland and Labrador
NS: Nova Scotia
PE: Prince Edward Island
NB: New Brunswick
QC: Quebec
ON: Ontario
MB: Manitoba
SK: Saskatchewan
AB: Alberta
BC: British Columbia
NT: Northwest Territories
YT: Yukon
NU: Nunavut

COMMON CORE

The criteria for determining common core depend on the performance of sub-tasks. If at least 70% of the responding jurisdictions (excluding NVs and NDs) perform a sub-task, it shall be considered common core.

Interprovincial Standards "Red Seal" Examinations are based on the common core identified through this validation process. Validation identifies what will be assessed through the interprovincial examination.

BLOCK AND TASK WEIGHTING (APPENDIX D)

This appendix represents the block and task percentages as submitted by each jurisdiction.

Each jurisdiction, with the use of a provincial/territorial occupational advisory committee, validates the content, places percentages on blocks and tasks, and indicates whether or not the sub-tasks are performed by the skilled workers within the occupation. The results of this exercise are submitted to the NOA Team who then analyzes the data and develops this appendix which provides the individual jurisdictional validation results as well as the national averages of all responses.

PIE CHART (APPENDIX E)

The graph depicts the national percentages assigned to blocks in the analysis.

SCOPE OF THE OIL BURNER MECHANIC OCCUPATION

Oil burner mechanics install, repair and maintain all types of oil-fired domestic and commercial appliances, equipment, components and systems. On new installations, they may design, assemble and install the heating and ventilation systems, install oil burner components such as control devices and associated wiring, install fuel supply systems and connect the plumbing to mechanical and electrical systems. They may also install, maintain and repair wood/oil heating systems.

Oil burner mechanics work in the residential, commercial and industrial sectors. They may be self-employed or employed by heating, ventilation and air conditioning (HVAC) installation and service companies.

Service calls and emergency calls may take place anytime: days, evenings or weekends. Full time and seasonal employment opportunities are available.

Oil burner mechanics must have good mechanical aptitude, problem solving skills and good customer relations skills. A good understanding of basic electrical/electronic theory and *The House as a System* is also required. They may give cost estimates for required work and explain the operation and maintenance of appliances and systems.

This analysis recognizes similarities or overlaps with the work of refrigeration and air conditioning mechanics, gasfitters, plumbers and sheet metal workers.

Experienced oil burner mechanics may advance into supervisory and management positions or move into self-employment.

OCCUPATIONAL OBSERVATIONS

Oil burner mechanics must continually upgrade their skills to become proficient with new products and equipment introduced into the industry. Testing efficiencies are more easily realized with the introduction of computerized sensors, electronic and digital controls.

Technological changes and stringent new regulations have forced oil burner mechanics to upgrade their skills and constantly apprise themselves regarding environmental legislation. The increasingly complex and stringent environmental laws, especially regarding oil storage units, are having a major impact on the occupation. The mechanic must recognize potential hazards and react to dangerous situations. The skill of containment is becoming more critical and environmental incident reporting procedures are evolving areas for the mechanic.

Retrofitting existing equipment in an efficient and less expensive manner is becoming a more significant job task. Customers continue to ask the oil burner mechanic for more input and advice on choosing a highly efficient and cost effective system.

A move to alternative fuel sources continues to make a major impact on the oil burner mechanic trade. The mechanic must access specialized training in order to become proficient in the delivery, storage, distribution and combustion of such fuels with specific emphasis on safe handling and system operation.

SAFETY

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance to industry in Canada. These responsibilities are shared and require the joint efforts of government, employers and employees. It is imperative that all parties are aware of circumstances and conditions that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to accidents or injury.

It is generally recognized that a safety-conscious attitude and work practices contribute to a healthy, safe and accident-free working environment.

It is imperative to apply and be familiar with the Occupational Health and Safety Acts and Workplace Hazardous Material Information System (WHMIS) Regulations. As well, it is essential to determine workplace hazards and take measures to protect oneself, co-workers, the public and the environment. All tasks are to be performed in accordance with manufacturers' installation and maintenance guidelines as well as the current installation code for oil burning equipment.

As safety education is an integral part of training in all jurisdictions, personal safety practices are not recorded in this document. However, the technical safety aspect relating to each task and sub-task are included throughout this analysis.

ANALYSIS

BLOCK A

OCCUPATIONAL SKILLS

Trends: *There is an increase in the use of portable battery-powered tools. Electronic testing equipment is evolving to deliver more accurate and more detailed information. Tools are becoming more ergonomic and user-friendly. There is an increase in the regulations governing personal protective equipment (PPE) and Transportation of Dangerous Goods (TDG). The use of computers is increasing for information sharing such as billing, training and dispatching. There is an increase in the use of telecommunication equipment such as cell phones and electronic messaging devices.*

Related Components: All components.

Tools and Equipment: See Appendix A.

Task 1 **Uses tools and equipment.**

Context: *The use of tools and equipment is important to oil burner mechanics in order to properly perform their tasks. Using proper tools increases efficiency, productivity and quality of work.*

Sub-task

1.01 **Uses hand tools.**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

Supporting Knowledge & Abilities

1.01.01	knowledge of types of hand tools
1.01.02	knowledge of hand tool operating procedures
1.01.03	knowledge of limitations of use of hand tools
1.01.04	ability to organize hand tools
1.01.05	ability to select hand tools
1.01.06	ability to maintain hand tools
1.01.07	ability to store hand tools

1.01.08	ability to recognize worn, damaged or defective hand tools
1.01.09	ability to apply hand-eye coordination

Sub-task

1.02 Uses power tools. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.02.01	knowledge of types of power tools
1.02.02	knowledge of power tool operating procedures
1.02.03	knowledge of limitations of use of power tools
1.02.04	ability to organize power tools
1.02.05	ability to select power tools
1.02.06	ability to maintain power tools
1.02.07	ability to store power tools
1.02.08	ability to recognize worn, damaged or defective power tools
1.02.09	ability to apply hand-eye coordination

Sub-task

1.03 Uses powder-actuated tools. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	no	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.03.01	knowledge of types of powder-actuated tools
1.03.02	knowledge of types of shots
1.03.03	knowledge of certification requirements

1.03.04	knowledge of powder-actuated tool operating procedures
1.03.05	knowledge of limitations of use of powder-actuated tools
1.03.06	ability to select powder-actuated tools
1.03.07	ability to maintain powder-actuated tools
1.03.08	ability to store powder-actuated tools
1.03.09	ability to recognize worn, damaged or defective powder-actuated tools
1.03.10	ability to apply hand-eye coordination

Sub-task

1.04 Uses measuring and testing equipment.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.04.01	knowledge of types of measuring and testing equipment
1.04.02	knowledge of measuring and testing equipment operating procedures
1.04.03	ability to perform basic calculations
1.04.04	ability to convert between imperial and metric measurements
1.04.05	ability to interpret measurements
1.04.06	ability to organize measuring and testing equipment
1.04.07	ability to select measuring and testing equipment
1.04.08	ability to verify calibration of measuring and testing equipment

1.04.09	ability to maintain measuring and testing equipment
1.04.10	ability to store measuring and testing equipment

Sub-task

1.05 Uses hoisting, lifting and rigging equipment.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.05.01	knowledge of types of hoisting, lifting and rigging equipment
1.05.02	knowledge of operating procedures
1.05.03	knowledge of applications of hoisting, lifting and rigging equipment
1.05.04	knowledge of limitations of hoisting, lifting and rigging equipment
1.05.05	ability to recognize safe lifting locations or points
1.05.06	ability to maintain hoisting, lifting and rigging equipment
1.05.07	ability to recognize worn, damaged or defective hoisting, lifting and rigging equipment
1.05.08	ability to store hoisting, lifting and rigging equipment

Sub-task

1.06 Uses ladders and platforms.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.06.01	knowledge of types of ladders such as step ladders and extension ladders
1.06.02	knowledge of types of platforms such as scaffolds, hydraulic lifts and scissor lifts
1.06.03	knowledge of government regulations
1.06.04	knowledge of operating procedures
1.06.05	knowledge of limitations of ladders and platforms
1.06.06	ability to secure ladders and platforms
1.06.07	ability to maintain ladders and platforms
1.06.08	ability to recognize worn, damaged or defective ladders and platforms

Sub-task

1.07 Uses soldering, flaring and threading tools.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.07.01	knowledge of Workplace Hazardous Materials Information System (WHMIS)
1.07.02	knowledge of types of soldering, flaring and threading equipment
1.07.03	knowledge of alloys and fluxes
1.07.04	knowledge of Transportation of Dangerous Goods (TDG) regulations
1.07.05	knowledge of ventilation requirements

1.07.06	ability to recognize flammable materials
1.07.07	ability to match alloy to specific component to be soldered, flared and threaded
1.07.08	ability to select soldering, flaring and threading equipment
1.07.09	ability to organize soldering, flaring and threading equipment
1.07.10	ability to maintain soldering, flaring and threading equipment
1.07.11	ability to store soldering, flaring and threading equipment

Sub-task

1.08 Uses personal protective equipment (PPE) and safety equipment.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

1.08.01	knowledge of types of PPE
1.08.02	knowledge of types of safety equipment
1.08.03	knowledge of PPE and safety equipment operations
1.08.04	knowledge of training requirements for PPE and safety equipment
1.08.05	knowledge of location of PPE and safety equipment
1.08.06	knowledge of workplace safety and health regulations
1.08.07	ability to select PPE and safety equipment
1.08.08	ability to maintain PPE and safety equipment

1.08.09	ability to store PPE and safety equipment
1.08.10	ability to recognize worn, damaged or defective PPE and safety equipment

Task 2 Organizes work.

Context: Organizing work ensures quality, efficient and safe performance of oil burner mechanics' duties and accountability for their work.

Sub-task

2.01 Communicates with others. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.01.01	knowledge of customer expectations
2.01.02	knowledge of communication equipment and technology
2.01.03	ability to interact with customers
2.01.04	ability to communicate with industry professionals
2.01.05	ability to communicate with other tradespeople
2.01.06	ability to communicate with apprentices
2.01.07	ability to communicate with supervisors and management
2.01.08	ability to use communication equipment

Sub-task

2.02 Maintains clean and safe work environment.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.02.01	knowledge of safety regulations
2.02.02	knowledge of company safety policies
2.02.03	knowledge of environmental guidelines and regulations
2.02.04	ability to recognize and correct unsafe conditions
2.02.05	ability to keep workplace tidy and organized

Sub-task

2.03 Interprets codes and documentation.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.03.01	knowledge of B139 code
2.03.02	knowledge of relevant sections of codes such as building, plumbing, electrical and safety codes
2.03.03	knowledge of types of documentation such as permits, warranties and invoices
2.03.04	knowledge of trade terminology present in codes and documentation
2.03.05	ability to locate specific information in codes and documentation

Sub-task

2.04 Completes documentation. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.04.01	knowledge of types of business documentation such as work orders, purchase orders, service invoices and warranties
2.04.02	knowledge of types of government forms such as permits, inspection reports and environmental forms
2.04.03	ability to prepare quote
2.04.04	ability to prepare material list
2.04.05	ability to complete final inspection report
2.04.06	ability to use documentation equipment such as computers, digital cameras and video cameras

Sub-task

2.05 Interprets drawings. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.05.01	knowledge of types of drawings such as blueprints, shop drawings and sketches
2.05.02	knowledge of drawing components such as lines, symbols, legends and schedules
2.05.03	knowledge of specifications
2.05.04	ability to use drawing instruments
2.05.05	ability to locate layout dimensions

2.05.06	ability to reference specifications
2.05.07	ability to scale imperial and metric measurements

Sub-task

2.06 Performs basic distribution layout.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.06.01	knowledge of building size and application
2.06.02	knowledge of types of appliances and components
2.06.03	knowledge of forced air distribution systems
2.06.04	knowledge of types of hydronic distribution systems such as radiant floor, fin tube and cast iron
2.06.05	knowledge of pipe and duct sizes, types and flow rates
2.06.06	ability to evaluate requirements
2.06.07	ability to take worksite measurements
2.06.08	ability to calculate heat loss and heat gain
2.06.09	ability to determine location of piping and ducting

Sub-task

2.07 Organizes material and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.07.01	knowledge of types of material

2.07.02	knowledge of types of components
2.07.03	ability to select material and components
2.07.04	ability to prepare material and components
2.07.05	ability to order material and components
2.07.06	ability to take worksite measurements
2.07.07	ability to clean pipes and fittings

Sub-task

2.08 Commissions appliances and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

2.08.01	knowledge of appliance and component operations
2.08.02	knowledge of codes
2.08.03	ability to verify appliance operation
2.08.04	ability to verify system operation
2.08.05	ability to perform system analysis
2.08.06	ability to perform visual inspections

BLOCK B

FUEL SUPPLY AND STORAGE SYSTEMS

Trends: *There is an increased enforcement of codes. Fuel storage tanks are now made of a variety of materials including heavier gauge metals, fibreglass, high density plastic and stainless steel. There is an increased use of expansive coil (expansion loop), protected fuel lines and guards for weather protection of components. Reinforced slabs are more common for tank bases.*

Related Components: Fuel storage tanks, fuel lines, pumps, valves, gauges, vent alarms, fittings, pipes, guards, filters, tank stands, caps, supports, tank bases.

Tools and Equipment: See Appendix A.

Task 3 **Installs fuel storage tanks.**

Context: *Stringent new jurisdictional regulations have mandated that oil burner mechanics install fuel storage tanks in strict adherence to standards to prevent environmental mishaps. New guards and improved connections ensure that leaks are minimized and the storage of fuel oil is more secure and less subjected to accidents and system defects.*

Sub-task

3.01 **Selects fuel storage tanks.**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

Supporting Knowledge & Abilities

3.01.01	knowledge of tank composition such as fibreglass, plastic and stainless steel
3.01.02	knowledge of tank design
3.01.03	knowledge of building size and geographic location
3.01.04	knowledge of accessibility of tank location
3.01.05	ability to determine tank for specific location
3.01.06	ability to select stand

Sub-task

3.02 Determines fuel storage tank location.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

3.02.01	knowledge of location of utilities such as water source and electrical supply
3.02.02	knowledge of local regulations
3.02.03	knowledge of building orientation and property lines
3.02.04	knowledge of location of building openings such as air supply, windows and doors
3.02.05	knowledge of tank capacity and design
3.02.06	knowledge of customer preferences
3.02.07	ability to take worksite measurements

Sub-task

3.03 Prepares location for fuel storage tanks.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

3.03.01	knowledge of tank weight at total capacity
3.03.02	knowledge of location of heating appliance
3.03.03	knowledge of types of tank base material such as poured concrete or reinforced pads
3.03.04	ability to prepare base such as removing soil and compacting base
3.03.05	ability to calculate maximum weight load
3.03.06	ability to level tank base

3.03.07	ability to pour concrete pad
3.03.08	ability to select stand
3.03.09	ability to assess for possibility of soil erosion

Sub-task

3.04 Positions fuel storage tank.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

3.04.01	knowledge of tank incline required for tank design such as end and bottom outlet
3.04.02	knowledge of environmental conditions
3.04.03	ability to secure tank legs
3.04.04	ability to secure tank to base with fasteners

Sub-task

3.05 Installs fuel storage tank components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

3.05.01	knowledge of types and locations of components such as gauges, tank valves and vent alarms
3.05.02	knowledge of protection for components
3.05.03	ability to seal components using approved sealants
3.05.04	ability to tighten components
3.05.05	ability to retrofit components
3.05.06	ability to test and inspect for fuel leaks

Sub-task

3.06 Installs fill and vent pipes.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

3.06.01	knowledge of sizes and types of fill and vent pipes
3.06.02	knowledge of pipe fittings such as caps, elbows and unions
3.06.03	ability to use fasteners and supports
3.06.04	ability to cut and seal holes in building envelope
3.06.05	ability to prepare pipe by threading and applying sealing compound
3.06.06	ability to seal components using approved sealants
3.06.07	ability to torque pipe and fittings
3.06.08	ability to test and inspect for fuel leaks

Task 4 Installs fuel supply system.

Context: Environmental impact regulations throughout Canada have required that oil burner mechanics improve skills in the installation of relevant fuel supply components. Improved and more durable components allow for movement of integral parts without breakage or oxidation.

Sub-task

4.01 Selects fuel supply components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

4.01.01	knowledge of components such as oil filters, valves, pumps and oil lines

4.01.02	knowledge of types of valves such as oil-safety, in-line, anti-siphon and check
4.01.03	knowledge of manufacturers' specifications
4.01.04	ability to determine size of fuel lines and oil filters
4.01.05	ability to determine when to use booster pump systems
4.01.06	ability to determine when to use two-line systems
4.01.07	ability to determine when to use specialized components

Sub-task

4.02 Installs fuel supply components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

4.02.01	knowledge of sealants
4.02.02	ability to determine location of components such as valves, booster pumps and de-aerators
4.02.03	ability to determine travel path of fuel line
4.02.04	ability to fasten and support pipe
4.02.05	ability to seal components using approved sealants
4.02.06	ability to test and inspect for fuel leaks

BLOCK C

OIL-FIRED HEATING SYSTEMS

Trends: *Consumers are increasingly demanding a more comfortable and cost-effective heating system. The industry is answering with high efficiency appliances and heating system designs such as radiant floor heating and integrated combination systems.*

Related Appliances: Boilers, water heaters, wood/oil combination appliances, forced air furnaces, incinerators, oil stoves, space heaters, combo systems (water/air heating).

Related Components: Indirect water heaters, condensate pumps, circulating pumps, manifolds, valves (zone, pressure reducing, check, flow, pressure relief, back flow preventing, low water cut-off), relays, expansion tanks, auto vents, air scoops, limit controls, smoke pipe, ducting, plenums, dampers, thermostats, draft controls, draft inducers, registers, grilles, piping, tubing, humidifiers, dehumidifiers, air cleaning devices, heat recovery ventilators.

Tools and Equipment: Hand tools, power tools, powder-actuated tools, measuring and testing equipment, hoisting, lifting and rigging equipment, soldering, flaring and threading equipment, PPE and safety equipment.

Task 5 **Installs and retrofits oil-fired and wood/oil appliances and components.**

Context: *The appliance provides the heat for all heating systems. Oil burner mechanics must assemble and position the appliance and complete all connections to fuel and electrical supply and to venting and distribution systems.*

Sub-task

5.01 **Selects appliance.**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

Supporting Knowledge & Abilities

5.01.01	knowledge of code requirements
5.01.02	knowledge of system requirements
5.01.03	knowledge of local regulations
5.01.04	knowledge of types of appliances such as front and rear breech, and multi-position
5.01.05	knowledge of manufacturers' specifications

5.01.06	knowledge of customer needs
5.01.07	knowledge of desired appliance location
5.01.08	knowledge of types of hydronic heating appliances
5.01.09	knowledge of location of other appliances such as clothes dryer, heat recovery ventilator and water heater

Sub-task

5.02 Positions appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.02.01	knowledge of code requirements
5.02.02	knowledge of local regulations
5.02.03	knowledge of types of appliances such as front and rear breech, and multi-position
5.02.04	knowledge of manufacturers' specifications
5.02.05	knowledge of desired appliance location
5.02.06	knowledge of types of hydronic heating appliances
5.02.07	knowledge of location of other appliances such as clothes dryer, heat recovery ventilator and water heater
5.02.08	knowledge of types of fasteners
5.02.09	ability to level appliance
5.02.10	ability to mount appliance
5.02.11	ability to secure appliance using fasteners

Sub-task

5.03 Installs components on appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.03.01	knowledge of appliance components such as burners, appliance jackets and controls
5.03.02	knowledge of sequence of assembly
5.03.03	knowledge of location of controls
5.03.04	ability to apply sealing compounds
5.03.05	ability to attach fittings and adapters
5.03.06	ability to connect water supply to the appliance
5.03.07	ability to assemble and mount burners

Sub-task

5.04 Connects fuel supply to appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.04.01	knowledge of types of fuel lines such as steel, flexible and coated copper
5.04.02	knowledge of types of adapters and fittings
5.04.03	knowledge of codes
5.04.04	ability to apply sealing compounds
5.04.05	ability to flare fuel line
5.04.06	ability to support fuel line

5.04.07	ability to protect fuel line
5.04.08	ability to determine termination point

Sub-task

5.05 Connects electrical supply to appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	no	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.05.01	knowledge of relevant sections of electrical codes
5.05.02	knowledge of types of connectors and fasteners
5.05.03	ability to select wire for specific load requirements
5.05.04	ability to strip and fasten wire
5.05.05	ability to secure wire to building structure
5.05.06	ability to seal electrical connectors on balanced flue and direct vent applications

Sub-task

5.06 Connects vent/exhaust piping to appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.06.01	knowledge of vent/exhaust piping components
5.06.02	knowledge of types of fasteners
5.06.03	knowledge of sequence of application of sealants
5.06.04	knowledge of codes

5.06.05	ability to cut and crimp piping
5.06.06	ability to fasten piping to appliance
5.06.07	ability to apply sealants

Sub-task

5.07 Installs dump zones for wood/oil systems.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.07.01	knowledge of application of dump zones
5.07.02	knowledge of appropriate location of dump zones
5.07.03	ability to assemble dump zone components
5.07.04	ability to solder connections on hydronic systems
5.07.05	ability to fabricate emergency access panel on forced air heating system
5.07.06	ability to connect wiring to dump zones

Sub-task

5.08 Connects drain to appliance.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

5.08.01	knowledge of relevant sections of plumbing codes
5.08.02	knowledge of liquids to be drained
5.08.03	knowledge of termination point of drain
5.08.04	knowledge of drain pipe materials
5.08.05	ability to fasten drain pipe to appliance

5.08.06 ability to protect drain pipe

5.08.07 ability to apply sealant

Task 6 Installs forced air heating systems.

Context: Warm air is delivered to all points of the building through the ducts. Oil burner mechanics install the furnace, the distribution system and related components.

Sub-task

6.01 Assembles ductwork. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

6.01.01 knowledge of ductwork material

6.01.02 knowledge of components installed during assembly such as zone dampers and fire dampers

6.01.03 knowledge of sequence of assembly

6.01.04 knowledge of hangers and supports

6.01.05 ability to join ducting

6.01.06 ability to modify ductwork by using methods such as cutting, forming and flanging

6.01.07 ability to size supply and return ducts

Sub-task

6.02 Installs ductwork. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

6.02.01 knowledge of codes

6.02.02 knowledge of types of sealants such as duct sealer, foil tape and vinyl duct tape

6.02.03	ability to connect plenums to appliance
6.02.04	ability to connect starting collars and takeoffs
6.02.05	ability to install hangers
6.02.06	ability to seal joints
6.02.07	ability to connect trunk lines and branch lines
6.02.08	ability to install dampers such as manual and motorized
6.02.09	ability to install finish components such as registers and return air grilles

Task 7 Installs hydronic heating systems.

Context: Hydronic heating systems heat buildings through the circulation of liquids. Oil burner mechanics install the boilers, the distribution systems and related components.

Sub-task

7.01 Assembles boilers.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

7.01.01	knowledge of types of boilers such as horizontal and vertical tube, cast iron and sectional
7.01.02	knowledge of applications of boilers such as residential and commercial
7.01.03	knowledge of sequence of assembly
7.01.04	knowledge of boiler components
7.01.05	ability to join sections of boilers
7.01.06	ability to fasten jacket
7.01.07	ability to apply sealants
7.01.08	ability to install boiler components such as aquastat well, controls and boiler drain

Sub-task

7.02 Installs hydronic distribution system.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

7.02.01	knowledge of types of distribution systems such as radiant floor, cast iron and fin tube convector
7.02.02	knowledge of piping and tubing materials
7.02.03	knowledge of piping and tubing size
7.02.04	knowledge of relevant plumbing codes
7.02.05	ability to prepare rough-in to accept distribution systems
7.02.06	ability to install fasteners and supports
7.02.07	ability to join and fit piping and fittings using methods such as crimping, soldering, threading and using compression fittings
7.02.08	ability to fasten piping and tubing

Sub-task

7.03 Installs indirect water heater.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

7.03.01	knowledge of types of indirect water heaters such as stainless steel and glass lined heaters
7.03.02	knowledge of relevant sections of plumbing and electrical codes
7.03.03	knowledge of water requirements of building occupants
7.03.04	ability to level heater

7.03.05	ability to wire heater
7.03.06	ability to connect heater to appliance
7.03.07	ability to install heater components such as circulating pump, check valves and temperature controls

Sub-task

7.04 Installs oil-fired water heater. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

7.04.01	knowledge of water heater components such as venting, controls, drains, vacuum relief valves, pressure reducing valves and anti-scald valves
7.04.02	knowledge of water heater sizes
7.04.03	knowledge of types of burners
7.04.04	knowledge of flooring materials
7.04.05	knowledge of manufacturers' specifications and recommendations
7.04.06	ability to size burner
7.04.07	ability to install components such as burners
7.04.08	ability to connect appliance to fuel, electrical and water supply
7.04.09	ability to connect to distribution system
7.04.10	ability to level heater

Sub-task

7.05 Installs hydronic heating system components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

7.05.01	knowledge of hydronic heating system components such as expansion tanks, air scoops and backflow preventers
7.05.02	knowledge of types of valves
7.05.03	knowledge of low-water cutoffs
7.05.04	ability to locate and fasten components
7.05.05	ability to join components using methods such as crimping, expanding, soldering and threading
7.05.06	ability to seal components
7.05.07	ability to connect components to electrical supply

BLOCK D

VENTING, COMBUSTION AIR AND MAKE-UP AIR

Trends: *Balanced flues are becoming more predominant. Equipment is becoming more efficient resulting in lower stack temperatures. Building envelopes are becoming tighter requiring a more in-depth knowledge of air supply and venting. Due to lower stack temperature and new building design and construction, new venting materials are entering the marketplace.*

Related Components: Sealants, ductwork and piping, insulation, fasteners, liners, chimney (pre-fab), direct vents, bricks, grilles, hoods, caps, dampers, fans, controls, wiring, construction material, heater (pre-heat).

Tools and Equipment: Hand tools, power tools, powder-actuated tools, hoisting, lifting and rigging equipment, measuring and testing equipment, PPE and safety equipment.

Task 8 **Installs venting systems.**

Context: *Venting systems convey products of combustion safely outside.*

Sub-task

8.01 **Selects venting system.**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

Supporting Knowledge & Abilities

8.01.01	knowledge of types of venting systems such as chimney, balanced flue and mechanical
8.01.02	knowledge of relevant sections of code
8.01.03	knowledge of manufacturers' specifications
8.01.04	knowledge of chimney construction
8.01.05	ability to measure clearances
8.01.06	ability to calculate capacities

Sub-task

8.02 Prepares location for termination.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

8.02.01	knowledge of building construction
8.02.02	knowledge of relevant sections of building codes
8.02.03	knowledge of material characteristics
8.02.04	knowledge of manufacturers' specifications
8.02.05	knowledge of outside influences such as trees, dust and snow
8.02.06	knowledge of regional conditions
8.02.08	ability to measure clearances
8.02.09	ability to perform basic carpentry
8.02.10	ability to visualize layout of system
8.02.11	ability to perform basic masonry
8.02.12	ability to remove liners

Sub-task

8.03 Installs venting components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

8.03.01	knowledge of types of venting components and liners
8.03.02	knowledge of manufacturers' specifications
8.03.03	knowledge of types of sealants
8.03.04	knowledge of types of fasteners and supports

8.03.05	ability to assemble components
8.03.06	ability to apply sealants
8.03.07	ability to fasten and secure venting and components
8.03.08	ability to install liners
8.03.09	ability to perform basic masonry

Sub-task

8.04 Secures venting system to structure.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

8.04.01	knowledge of types of fasteners and supports
8.04.02	knowledge of manufacturers' specifications
8.04.03	knowledge of relevant sections of codes
8.04.04	ability to measure support points
8.04.05	ability to fasten venting system to structure
8.04.06	ability to apply sealants
8.04.07	ability to perform basic masonry

Task 9 **Installs equipment and components for combustion air and make-up air.**

Context: *Equipment supplies adequate air for combustion and make-up air and to maintain balanced pressure in the mechanical room.*

Sub-task

9.01 **Selects equipment and components.**

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

9.01.01	knowledge of appliances such as water heater and forced air furnace
9.01.02	knowledge of components such as fans, ducts and grilles
9.01.03	knowledge of appliance capacities
9.01.04	knowledge of relevant sections of codes
9.01.05	ability to measure clearances
9.01.06	ability to calculate size
9.01.07	ability to determine location of intakes for combustion air and make-up air

Sub-task

9.02 **Prepares location of equipment and components for combustion air and make-up air.**

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

9.02.01	knowledge of building construction
9.02.02	knowledge of relevant sections of building codes
9.02.03	knowledge of manufacturers' specifications

9.02.04	knowledge of material characteristics
9.02.05	knowledge of outside influences such as trees, dust and snow
9.02.06	knowledge of regional conditions
9.02.07	ability to perform basic carpentry
9.02.08	ability to measure clearances
9.02.09	ability to visualize layout of system

Sub-task

9.03 Assembles equipment and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

9.03.01	knowledge of equipment and components
9.03.02	knowledge of manufacturers' specifications
9.03.03	knowledge of types of sealants
9.03.04	ability to apply sealants
9.03.05	ability to connect components

Sub-task

9.04 Secures equipment and components to structure.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

9.04.01	knowledge of fasteners and supports
9.04.02	knowledge of manufacturers' specifications
9.04.03	knowledge of relevant sections of codes

9.04.04	ability to measure spacing for fasteners and supports
9.04.05	ability to fasten equipment and components to structure

BLOCK E

ELECTRICAL/ELECTRONIC SYSTEMS

Trends: *Electro-mechanical controls are still in common use; however, there is a move towards electronic controls such as thermostats, relays and primary controls. There is an increased use of Electronically Commutated Motors (ECM) as they are more efficient. Variable speed drive motors permit greater comfort, energy savings and reduced noise.*

Related Components: Controls (thermostat, aquastat and mixing), loads (motors, transformers and damper motors), sealants, fasteners, fans, wiring, interlocks, switches.

Tools and Equipment: Hand tools, power tools, powder-actuated tools, measuring and testing equipment, PPE and safety equipment.

Task 10 Installs electrical and electronic systems.

Context: *Electrical and electronic systems are more user-friendly. They save fuel, work more efficiently and quietly, require less maintenance and provide increased comfort.*

Sub-task

10.01 Selects controls and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

10.01.01	knowledge of types of controls
10.01.02	knowledge of types of loads
10.01.03	knowledge of sequence of operation of controls
10.01.04	knowledge of application of controls and components
10.01.05	knowledge of relevant sections of electrical, building and oil codes

10.01.06	knowledge of basic electronic theory as it relates to system components such as electronic controls, Electronically Commutated Motors (ECM) and hydronic mixing controls
10.01.07	knowledge of basic electrical principles as they relate to system operation
10.01.08	ability to understand the system and its design

Sub-task

10.02 Selects location of controls and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

10.02.01	knowledge of positioning of controls, loads and wiring
10.02.02	knowledge of manufacturers' specifications
10.02.03	knowledge of relevant sections of electrical, building and oil codes
10.02.04	ability to position controls, loads and wiring
10.02.05	ability to measure distances
10.02.06	ability to recognize physical and environmental limitations of controls and loads

Sub-task

10.03 Installs controls and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

10.03.01	knowledge of fasteners and supports
10.03.02	knowledge of manufacturers' specifications

10.03.03	knowledge of relevant sections of codes
10.03.04	knowledge of basic carpentry skills
10.03.05	ability to install wire
10.03.06	ability to follow wiring diagram
10.03.07	ability to fasten controls and components

Task 11 Tests electrical and electronic systems.

Context: Oil burner mechanics are responsible for testing related electrical and electronic systems for safety and functionality.

Sub-task

11.01 Cycles appliance controls.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

11.01.01	knowledge of operation of controls
11.01.02	knowledge of sequence of operation of system
11.01.03	ability to operate appliance controls

Sub-task

11.02 Checks operating and safety controls.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

11.02.01	knowledge of system operation
11.02.02	knowledge of circuits
11.02.03	knowledge of set points
11.02.04	ability to disable operating components

11.02.05 ability to trace circuits

11.02.06 ability to verify that controls operate to system specifications through full cycle

Sub-task

11.03 Checks accessories and components. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

11.03.01 knowledge of types of accessories such as zone valves, booster pumps and air cleaning devices

11.03.02 knowledge of types of components such as circulators, blower motors and burners

11.03.03 knowledge of system operation

11.03.04 knowledge of circuits

11.03.05 ability to use multi-meters and diagnostic equipment

11.03.06 ability to test circuits, accessories and components

11.03.07 ability to interpret readings

11.03.08 ability to verify that circuits, accessories and components operate to system specifications through full cycle

Sub-task

11.04 Sets up operating parameters. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

11.04.01 knowledge of system specifications

11.04.02	knowledge of operating controls such as thermostat, aquastat and fan control
11.04.03	ability to adjust controls
11.04.04	ability to adjust equipment and components to meet system design

BLOCK F

MAINTENANCE, REPAIR AND REMOVAL

Trends: *There are more complex systems requiring technical repair skills. New equipment is environmentally friendly and longer lasting. There are stricter regulations regarding the disposal of waste goods.*

Related Components: All appliances and components.

Tools and Equipment: See Appendix A.

Task 12 Maintains oil-fired heating systems and components.

Context: *Maintenance of oil-fired systems helps to ensure that the system operates safely, efficiently and economically. These systems include all oil-fired appliances as well as portable heating equipment.*

Sub-task

12.01 Checks oil-fired heating system and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

12.01.01 knowledge of equipment and its operation

12.01.02 knowledge of service history

12.01.03 ability to determine condition of equipment

12.01.04 ability to identify potential problem areas

Sub-task

12.02 Cleans components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

12.02.01 knowledge of cleaning methods such as vacuuming, flushing and washing

12.02.02	knowledge of cleaning materials
12.02.03	ability to drain and recharge expansion tanks
12.02.04	ability to clean distribution fan
12.02.05	ability to clean burner components
12.02.06	ability to clean exhaust components such as sidewall vents, direct vents, smoke pipe and chimneys
12.02.07	ability to set or adjust temperature and pressure controls

Sub-task

12.03 Changes preventative maintenance components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

12.03.01	knowledge of types of preventative maintenance components such as nozzles, oil filters, air filters, fan belts and gaskets
12.03.02	knowledge of component specifications
12.03.03	ability to access components
12.03.04	ability to install new components

Sub-task

12.04 Lubricates moving components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

12.04.01	knowledge of types of lubricants

12.04.02	knowledge of lubrication requirements such as frequency, locations and amount of lubricant
12.04.03	ability to apply lubricant

Task 13 Diagnoses oil-fired heating systems and components.

Context: Oil burner mechanics must be familiar with diagnostic techniques to enable safe, economical and efficient repairs.

Sub-task

13.01 Checks for electrical problems.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

13.01.01	knowledge of sequence of operation
13.01.02	knowledge of basic electrical principles
13.01.03	knowledge of electrical testing procedures
13.01.04	ability to interpret component schematics
13.01.05	ability to check for polarity
13.01.06	ability to check for continuity
13.01.07	ability to check voltage
13.01.08	ability to check amperage
13.01.09	ability to check resistance

Sub-task

13.02 Checks for burner problems. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

13.02.01	knowledge of burner operation
13.02.02	knowledge of burner components
13.02.03	knowledge of safety features such as primary controls and flame sensors
13.02.04	knowledge of combustion testing procedures
13.02.05	ability to check fuel supply
13.02.06	ability to check ignition
13.02.07	ability to check flame
13.02.08	ability to check safety features

Sub-task

13.03 Checks for distribution problems. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

13.03.01	knowledge of distribution systems and components
13.03.02	knowledge of distribution problems such as no heat, insufficient heat and excessive heat
13.03.03	knowledge of testing procedures
13.03.04	ability to isolate source of problem

Sub-task

13.04 Checks for problems with combustion air and make-up air.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

13.04.01	knowledge of combustion air and make-up air requirements
13.04.02	knowledge of building alterations
13.04.03	knowledge of testing procedures
13.04.04	ability to check for blockages
13.04.05	ability to check pressure differential

Task 14 Repairs oil-fired heating systems and components.

Context: Oil burner mechanics repair oil-fired heating systems and components in order to return the system to its correct and safe operation.

Sub-task

14.01 Corrects electrical problems.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

14.01.01	knowledge of basic electrical principles
14.01.02	knowledge of relevant sections of electrical codes
14.01.03	ability to interpret component schematics
14.01.04	ability to lock out equipment
14.01.05	ability to reset switches and breakers

14.01.06	ability to replace defective electrical components
14.01.07	ability to repair damaged wires and terminals

Sub-task

14.02 Corrects burner problems. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

14.02.01	knowledge of burner operation
14.02.02	knowledge of burner components
14.02.03	knowledge of safety features
14.02.04	ability to interpret component schematics
14.02.05	ability to repair and replace defective burner components
14.02.06	ability to set operating parameters
14.02.07	ability to reset burner components

Sub-task

14.03 Corrects distribution problems. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

14.03.01	knowledge of distribution systems and components
14.03.02	knowledge of building alterations
14.03.03	ability to interpret component schematics
14.03.04	ability to repair and replace defective distribution components
14.03.05	ability to purge hydronic distribution system

	14.03.06	ability to realign and adjust drive belts and pulleys
	14.03.07	ability to set operating parameters

Task 15 Removes appliances and components.

Context: Unsafe, inefficient and defective appliances and components are removed by oil burner mechanics. Proper storage and disposal of waste products and components is imperative.

Sub-task

15.01 Decommissions appliance and components.

Supporting Knowledge & Abilities

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

	15.01.01	knowledge of WHMIS
	15.01.02	knowledge of material handling hazards
	15.01.03	ability to identify waste products such as fuel tanks, oil, glycol, mercury, heavy metals, asbestos and contaminated soil
	15.01.04	ability to identify products that can be recycled
	15.01.05	ability to disconnect utilities
	15.01.06	ability to drain system
	15.01.07	ability to seal breeches
	15.01.08	ability to strap ductwork and piping
	15.01.09	ability to disassemble appliance

Sub-task

15.02 Disposes of waste products. **Supporting Knowledge & Abilities**

NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
yes	yes	yes	yes	ND	ND	ND	ND	ND	NV	yes	yes	NV

15.02.01	knowledge of jurisdictional guidelines and requirements for storage and disposal of removed components
15.02.02	knowledge of containment systems
15.02.03	knowledge of WHMIS
15.02.04	knowledge of TDG regulations and signage
15.02.05	knowledge of local resources for disposal such as environmental agencies, coast guard and certified disposal companies
15.02.06	ability to handle waste products and containers

APPENDICES

TOOLS AND EQUIPMENT

Hand Tools

adjustable pliers
adjustable wrenches
alignment bars
Allen wrenches
aviation snips
ball-peen hammer
box-end wrenches
burner brush
caulking gun
chipping hammer
claw hammer
combination wrenches
copper tube cutter
duct folder
duct stretcher
easy out
expanding tool
flame mirror
flaring tool
flashlight
folding pliers
grease gun
hacksaw
hand hole saw
levels
linesman pliers
locking pliers
needle nose pliers
nozzle wrenches
nut drivers
oil filter wrenches
open end wrenches
pipe wrenches
plastic pipe crimper
plastic pipe cutter
plumb-bob
porcelain cutter
pry bars
pullers
reamers
scraper
screwdrivers
sheet metal crimper
sheet metal hammer
side cutters
socket wrenches
steel pipe cutters
steel pipe reamers
square
tap and die sets
torque screwdrivers
torque wrenches
trouble light
trowels
tube benders
tube reamers
utility knife
wire crimpers
wire strippers

Power Tools

circular saw
compaction equipment
compressed air equipment
cutoff saw
electrical or battery operated drill
hammer drill
jigsaw
masonry cutting tool
powder actuated tools
power grinder
power nibbler
power pipe threaders
pressure washer
reciprocating saw
vacuum cleaner

Measuring and Testing Equipment

ammeters
anemometer
calculator
calliper gauge
callipers
CO analyzer
CO_2 testing equipment
control component tester
draft testing equipment
flame signal meter
heat gun
hygrometer
magnehelic gauge
manometer
measuring tape
megohmmeter
multimeter
O_2 testing equipment
potentiometer
pressure gauges
pyrometer
sling psychrometer
smoke testing equipment
stud sensor
temperature testing equipment
test lamp
T-gauges
ultrasound
vacuum gauges
velocity meters

Hoisting, Lifting and Rigging Equipment

chain falls
come-alongs
hand cart
hydraulic jack
ladder
rigging equipment
scaffolding

Soldering, Flaring and Threading Equipment

cutting torches
magnetic patches
manual pipe threader
soldering torch

Personal Protective Equipment and Safety Equipment

dust masks
ear plugs
face shields
fall arrest equipment
fire extinguishers
first aid kit
gas detection devices
gloves
hard hats
pylon
respirator
safety boots
safety glasses
safety tape

Business and Communication Equipment

adding machine
computers
cell phones
digital cameras
electronic messaging device
fax machine
photocopier
printer
video cameras

GLOSSARY

appliance	a device to convert fuel into energy, and including all components, controls, wiring, and piping required as part of the device by the applicable standard
boiler	an appliance intended to supply hot water or steam for space heating, processing or power purposes
burner	a device or group of devices forming an integral unit for the introduction of fuel, with or without air or oxygen, into the combustion zone for ignition
chimney	a primarily vertical shaft enclosing at least one vent for conducting flue gases to the outside atmosphere
combustion air	the air required for satisfactory combustion of fuel, including excess air
component	an essential part of an appliance that may be certified separately from the appliance
damper	a movable plate or valve for regulating the flow of air or flue gas
decommission	take out of service, dismantle and make safe
dump zone	safety bypass that diverts the excess temperature and pressure in the heating system
forced air furnace	a furnace equipped with a blower which provides the primary means for circulation of air (refer to furnace)
fuel oil	kerosene or any hydrocarbon oil as classified in CSA Standard B140.0, *General Requirements for Oil Burning Equipment*
furnace	a space-heating appliance, using warm air as the heating medium, and usually having provision for the attachment of ducts
heat exchanger	the firebox and any auxiliary heat transfer surfaces within the casing of an appliance
ignition	establishment of a flame
incinerator	an appliance in which combustible wastes are ignited and burned
indirect water heater	a water heater which derives its heat from a heating medium such as warm air, steam or hot water
limit control	a safety control intended to prevent unsafe conditions of temperature, pressure or liquid level

make-up air	fresh air that is introduced to the furnace room to replace air that has been exhausted
manual damper	an adjustable damper manually set and locked in the desired position
piping	the fuel conduits of circular cross section that are of sufficient wall thickness and or suitable outside diameter for threading to Iron Pipe Size (IPS) Standards, and that are specified by nominal inside diameter (ID)
plenum	a chamber for distributing warm air from a furnace to the supply ducts (supply plenum), or for receiving air to be heated by the furnace (return plenum)
retrofit	to replace an obsolete or defective component for the purpose of updating the heating system
safety control	an automatic control of a safety control system that is intended to automatically prevent unsafe operation of the controlled equipment, and may include relays, switches and other auxiliary equipment and interconnecting circuitry
storage tank	a tank for the storage of fuel and from which the fuel-burning equipment is not intended to be fed automatically
tubing	fuel conduits of circular cross section that are not of sufficient wall thickness or of suitable outside diameter to permit threading to Iron Pipe Size (IPS) Standards, and are specified by outside diameter (OD)
valve	a device by which the flow of a fluid may be started, stopped or regulated by a movable part which opens or obstructs passage
vent	an enclosed passageway for conveying flue gases
venting	the removal of flue gases or vent gases to the outside air by means of building openings or venting systems
venting system	a system for the removal of flue gases or vent gases to the outside air by means of vent connectors, chimneys, gas vents or exhaust systems, natural or mechanical
water heater	an appliance intended for the heating of water for plumbing services

ACRONYMS

ECM	Electronically Commutated Motors
TDG	Transportation of Dangerous Goods
WHMIS	Workplace Hazardous Materials Information System

BLOCK AND TASK WEIGHTING

BLOCK A OCCUPATIONAL SKILLS

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	6	5	5	7	ND	ND	ND	ND	ND	NV	5	10	NV	6%

Task 1 Uses tools and equipment.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	79	30	70	49	ND	ND	ND	ND	ND	NV	50	45	NV	54%

Task 2 Organizes work.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	21	70	30	51	ND	ND	ND	ND	ND	NV	50	55	NV	46%

BLOCK B FUEL SUPPLY AND STORAGE SYSTEMS

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	16	13	25	15	ND	ND	ND	ND	ND	NV	15	15	NV	17%

Task 3 Installs fuel storage tanks.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	50	50	50	46	ND	ND	ND	ND	ND	NV	40	50	NV	48%

Task 4 Installs fuel supply system.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	50	50	50	54	ND	ND	ND	ND	ND	NV	60	50	NV	52%

BLOCK C OIL-FIRED HEATING SYSTEMS

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	30	25	20	19	ND	ND	ND	ND	ND	NV	26	25	NV	24%

Task 5 Installs and retrofits oil-fired and wood/oil appliances and components.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	18	10	25	54	ND	ND	ND	ND	ND	NV	10	25	NV	23%

Task 6 Installs forced air heating systems.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	35	30	25	19	ND	ND	ND	ND	ND	NV	30	45	NV	31%

Task 7 Installs hydronic heating systems.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	47	60	50	27	ND	ND	ND	ND	ND	NV	60	30	NV	46%

BLOCK D VENTING, COMBUSTION AIR AND MAKE-UP AIR

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	11	12	15	15	ND	ND	ND	ND	ND	NV	20	20	NV	16%

Task 8 Installs venting systems.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	46	70	30	58	ND	ND	ND	ND	ND	NV	60	55	NV	53%

Task 9 Installs equipment and components for combustion air and make-up air.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	54	30	70	42	ND	ND	ND	ND	ND	NV	40	45	NV	47%

BLOCK E ELECTRICAL/ELECTRONIC SYSTEMS

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	19	20	15	22	ND	ND	ND	ND	ND	NV	24	10	NV	18%

Task 10 Installs electrical and electronic systems.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	46	50	80	37	ND	ND	ND	ND	ND	NV	50	40	NV	50%

Task 11 Tests electrical and electronic systems.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	54	50	20	63	ND	ND	ND	ND	ND	NV	50	60	NV	50%

BLOCK F MAINTENANCE, REPAIR AND REMOVAL

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	National Average
%	18	25	20	22	ND	ND	ND	ND	ND	NV	10	20	NV	19%

Task 12 Maintains oil-fired heating systems and components.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	19	30	20	24	ND	ND	ND	ND	ND	NV	10	25	NV	21%

Task 13 Diagnoses oil-fired heating systems and components.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	39	30	35	38	ND	ND	ND	ND	ND	NV	60	35	NV	40%

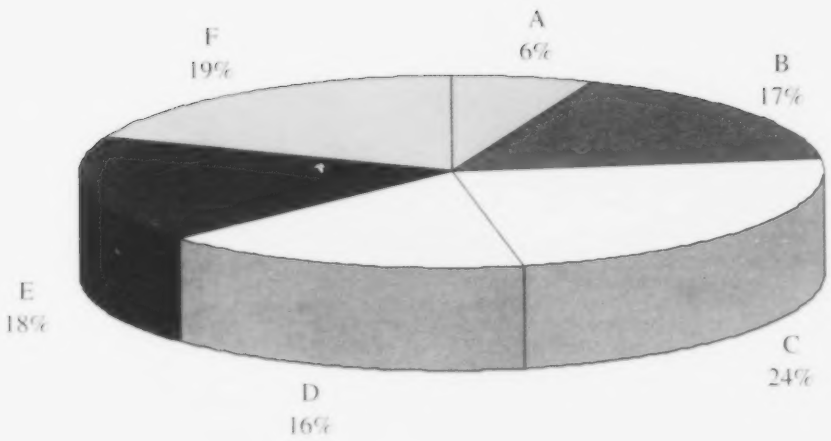
Task 14 Repairs oil-fired heating systems and components.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	31	30	35	29	ND	ND	ND	ND	ND	NV	20	30	NV	29%

Task 15 Removes appliances and components.

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU	
%	11	10	10	9	ND	ND	ND	ND	ND	NV	10	10	NV	10%

PIE CHART*



TITLES OF BLOCKS

Block A	Occupational Skills	Block D	Venting, Combustion Air and Make-up Air
Block B	Fuel Supply and Storage Systems	Block E	Electrical/Electronic Systems
Block C	Oil-Fired Heating Systems	Block F	Maintenance, Repair and Removal

* Average percentage of the total number of questions on an interprovincial examination, assigned to assess each block of the analysis, as derived from the collective input from workers within the occupation from all areas of Canada. Interprovincial examinations typically have from 100 to 150 multiple-choice questions.

TASK PROFILE CHART - OIL BURNER MECHANIC (2006)

BLOCKS	TASKS	SUB-TASKS					
A OCCUPATIONAL SKILLS	**1. Uses tools and equipment.**	1.01 Uses hand tools.	1.02 Uses power tools.	1.03 Uses powder-actuated tools.	1.04 Uses measuring and testing equipment.	1.05 Uses hoisting, lifting and rigging equipment.	1.06 Uses ladders and platforms.
		1.07 Uses soldering, flaring and threading tools.	1.08 Uses personal protective equipment (PPE) and safety equipment.				
	2. Organizes work.	2.01 Communicates with others.	2.02 Maintains clean and safe work environment.	2.03 Interprets codes and documentation.	2.04 Completes documentation.	2.05 Interprets drawings.	2.06 Performs basic distribution layout.
		2.07 Organizes material and components.	2.08 Commissions appliances and components.				
B FUEL SUPPLY AND STORAGE SYSTEMS	**3. Installs fuel storage tanks.**	3.01 Selects fuel storage tanks.	3.02 Determines fuel storage tank location.	3.03 Prepares location for fuel storage tanks.	3.04 Positions fuel storage tank.	3.05 Installs fuel storage tank components.	3.06 Installs fill and vent pipes.
	4. Installs fuel supply system.	4.01 Selects fuel supply components.	4.02 Installs fuel supply components.				
C OIL-FIRED HEATING SYSTEMS	**5. Installs and retrofits oil-fired and wood/oil appliances and components.**	5.01 Selects appliance.	5.02 Positions appliance.	5.03 Installs components on appliance.	5.04 Connects fuel supply to appliance.	5.05 Connects electrical supply to appliance.	5.06 Connects vent/exhaust piping to appliance.
		5.07 Installs dump zones for wood/oil systems.	5.08 Connects drain to appliance.				

OIL BURNER MECHANIC (2006)

BLOCKS	TASKS	SUB-TASKS				
	6. Installs forced air heating systems.	6.01 Assembles ductwork.	6.02 Installs ductwork.			
	7. Installs hydronic heating systems.	7.01 Assembles boilers.	7.02 Installs hydronic distribution system.	7.03 Installs indirect water heater.	7.04 Installs oil-fired water heater.	7.05 Installs hydronic heating system components.
D VENTING, COMBUSTION AIR AND MAKE-UP AIR	8. Installs venting systems.	8.01 Selects venting system.	8.02 Prepares location for termination.	8.03 Installs venting components.	8.04 Secures venting system to structure.	
	9. Installs equipment and components for combustion air and make-up air.	9.01 Selects equipment and components.	9.02 Prepares location of equipment and components for combustion air and make-up air.	9.03 Assembles equipment and components.	9.04 Secures equipment and components to structure.	
E ELECTRICAL / ELECTRONIC SYSTEMS	10. Installs electrical and electronic systems.	10.01 Selects controls and components.	10.02 Selects location of controls and components.	10.03 Installs controls and components.		
	11. Tests electrical and electronic systems.	11.01 Cycles appliance controls.	11.02 Checks operating and safety controls.	11.03 Checks accessories and components.	11.04 Sets up operating parameters.	
F MAINTENANCE, REPAIR AND REMOVAL	12. Maintains oil-fired heating systems and components.	12.01 Checks oil-fired heating system and components.	12.02 Cleans components.	12.03 Changes preventative maintenance components.	12.04 Lubricates moving components.	
	13. Diagnoses oil-fired heating systems and components.	13.01 Checks for electrical problems.	13.02 Checks for burner problems.	13.03 Checks for distribution problems.	13.04 Checks for problems with combustion air and make-up air.	

BLOCKS	TASKS	SUB-TASKS		
	14. Repairs oil-fired heating systems and components.	14.01 Corrects electrical problems.	14.02 Corrects burner problems.	14.03 Corrects distribution problems.
	15. Removes appliances and components.	15.01 Decommissions appliance and components.	15.02 Disposes of waste products.	